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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,698	12/28/2001	Yoshinori Hayashi	217049US2	3959

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EXAMINER

ALLEN, DENISE S

ART UNIT PAPER NUMBER

2872

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,698

Applicant(s)

HAYASHI, YOSHINORI

Examiner

Denise S Allen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-3,5,7,9,11,13,15-17,19,21,23,25,27 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,6,8,10,12,14,18,20,22,24,26,28 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5-9,11. 6) ☒ Other: IDS Paper Nos 13-15,17-19.

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DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group II (Claims 4, 6, 8, 10, 12, 14, 18, 20, 22, 24, 26, 28, and 30) in Paper No. 16 is acknowledged. The traversal is on the ground(s) that a search and examination of the entire application would not place a serious burden on the Examiner. This is not found persuasive because the inventions are distinct for the reasons given in the Office Action on May 2, 2003 (paper #12), the search required for Group I is not required for Group II, and the inventions have acquired a separate status in the art because of their recognized divergent subject matter.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1 – 3, 5, 7, 9, 11, 13, 15 – 17, 19, 21, 23, 25, 27, and 29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Invention (Group I), there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 16.

Information Disclosure Statement

The Information Disclosure Statements filed on December 28, 2001; and March 28, June 21, August 27, October 30, November 25, and December 23 and 30, 2002; and January 24, February 14, March 17, and May 22, 2003 (papers #5 – 9, 11, 13 – 15, and 17 – 19) contain documents that are not listed on the included forms PTO 1449. These documents have not been considered by the Examiner. These documents have been placed in the Application file.

The Information Disclosure Statements filed on June 21, 2002 and on May 22, 2003 did not include forms PTO 1449.

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The patent 6,384,949 is crossed out on the Information Disclosure Statement form PTO 1449 filed on December 23, 2002 (paper #11) because it is a duplicate listing of this patent. This document has been considered.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Figure 10 reference 116. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

Claims 4, 6, 8, 10, 12, 14, 18, 20, 22, 24, 26, 28, and 30 are objected to because of the following informalities: the limitation "a difference in a number of optical path inflection mirrors" (claim 4 lines 16 – 17, claim 14 lines 17 – 18, claim 18 lines 16 – 17, claim 28 lines 18 – 19, and claim 30 lines 17 – 18) is unclear because only one optical path inflection mirror per scanning optical system is recited, "an optical path inflection mirror" (claim 4 line 11, claim 14 line 12, claim 18 line 11, claim 28 line 13, and claim 30 line 12). Suggested clarification: replace the limitation "an optical path inflection mirror" with "at least one optical path inflection mirror" in claims 4, 14, 18, 28, and 30. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4, 6, 14, 18, 20, 28, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Kataoka et al (US 4,561,717).

Regarding claims 4, 14, 18, 28, and 30, Kataoka et al teaches an optical scanning device (Figure 4), comprising: a plurality of scanning optical systems configured to scan different scanning surfaces (references 9 and 10), each of the scanning optical systems comprising: a light source (references 19 and 20) configured to emit a light flux (references 1 and 2); a deflector (reference 3) configured to scan the light flux emitted from the light source, wherein the deflector is commonly used in the plurality of scanning optical systems; a scanning lens (references 5, 11, and 12) configured to condense the scanned light flux to the scanning surface; an optical path inflection mirror (references 13 and 14) configured to inflect the scanned light flux; and an imaging lens (references 15 and 16) configured to lead the light flux emitted from the light source to the deflector, wherein the plurality of scanning optical systems are provided in a sub-scanning direction (references 1 and 2 are arrayed in the sub-scanning direction as seen on the face of reference 3), and wherein a difference in a number of optical path inflection mirrors between two of the plurality of scanning optical systems is set to zero or an even number (both

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scanning optical systems have one optical path inflection mirror, therefore the difference in the number of inflection mirrors is zero).

Regarding claims 6 and 20, Kataoka et al teaches the scanning lens is one of a plurality of scanning lenses (references 5, 11, and 12) and the optical path inflection mirror (references 13 and 14) is provided among the plurality of scanning lenses (reference 13 is between references 5 and 11; and reference 14 is between reference 5 and 12).

Regarding claims 14 and 28, Kataoka et al teaches an image forming apparatus (Figure 6), comprising: a transfer sheet feeding device (references 24 and 25); and an optical scanning device as described above.

Claims 4, 8, 10, 12, 14, 18, 22, 24, 26, 28, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiraishi et al (US 5,774,249).

Regarding claims 4, 14, 18, 28, and 30, Shiraishi et al teaches an optical scanning device (Figures 1 and 2), comprising: a plurality of scanning optical systems (references B, C, M, and Y) configured to scan different scanning surfaces (references 58B, 58C, 58M, and 58Y), each of the scanning optical systems comprising: a light source (references 3Ba, 3Ca, 3Ma, and 3Ya) configured to emit a light flux; a deflector (reference 5) configured to scan the light flux emitted from the light source, wherein the deflector is commonly used in the plurality of scanning optical systems; a scanning lens (references 30a and 30b) configured to condense the scanned light flux to the scanning surface; an optical path inflection mirror (references 33B, 33C, 33M, 33Y, 35C, 35M, 35Y, 37C, 37M, and 37Y) configured to inflect the scanned light flux; and an imaging lens (references 9Ba, 9Ca, 9Ma, 9Ya, 11B, 11C, 11M, and 11Y) configured to lead the light flux emitted from the light source to the deflector, wherein the plurality of scanning optical systems

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are provided in a sub-scanning direction (Figure 4), and wherein a difference in a number of optical path inflection mirrors between two of the plurality of scanning optical systems is set to zero or an even number (reference B has one inflection mirror, reference 33B; reference C has three inflection mirrors, references 33C, 35C, and 37C; reference M has three inflection mirrors, references 33M, 35M, and 37M; and reference Y has three inflection mirrors, references 33Y, 35Y, and 37Y; therefore the difference in the number of inflection mirrors is either zero or two which is even).

Regarding claims 8 and 22, Shiraishi et al teaches the imaging lens comprises a resin lens (column 16 lines 11 – 15 and 24 – 25).

Regarding claims 10 and 24, Shiraishi et al teaches a housing (Figure 68) configured to support the light source (reference 3Bb) and the imaging lens (reference 9Bb).

Regarding claims 12 and 26, Shiraishi et al teaches the imaging lens is directly affixed to the housing (by reference 6Bb).

Regarding claims 14 and 28, Shiraishi et al teaches an image forming apparatus (Figure 1), comprising: a transfer sheet feeding device (references 52, 54, 56); and an optical scanning device as described above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise S Allen whose telephone number is (703) 305-7407. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (703) 305-0024. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

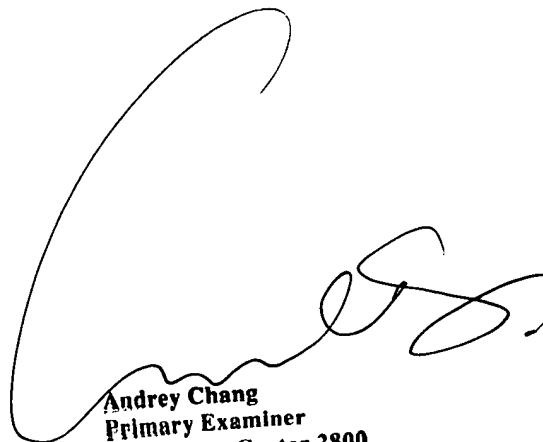
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Denise S Allen
Examiner
Art Unit 2872



dsa

July 18, 2003



Andrey Chang
Primary Examiner
Technology Center 2800